



Climate variability and environmental stress in the Sudan-Sahel zone of West Africa

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Abstract:

Environmental change in the Sudan-Sahel region of West Africa (SSWA) has been much debated since the droughts of the 1970s. In this article we assess climate variability and environmental stress in the region. Households in Senegal, Mali, Burkina Faso, Niger, and Nigeria were asked about climatic changes and their perceptions were compared across north-south and west-east rainfall gradients. More than 80% of all households found that rainfall had decreased, especially in the wettest areas. Increases in wind speeds and temperature were perceived by an overall 60-80% of households. Contrary to household perceptions, observed rainfall patterns showed an increasing trend over the past 20 years. However, August rainfall declined, and could therefore potentially explain the contrasting negative household perceptions of rainfall trends. Most households reported degradation of soils, water resources, vegetation, and fauna, but more so in the 500-900 mm zones. Adaptation measures to counter environmental degradation included use of manure, reforestation, soil and water conservation, and protection of fauna and vegetation. The results raise concerns for future environmental management in the region, especially in the 500-900 mm zones and the western part of SSWA.

Source: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3393058>

Resource Description

Communication: ☒

resource focus on research or methods on how to communicate or frame issues on climate change;
 surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience: ☒

audience to whom the resource is directed

Public

Exposure : ☒

weather or climate related pathway by which climate change affects health

Extreme Weather Event, Food/Water Security, Precipitation, Temperature

Climate Change and Human Health Literature Portal

Extreme Weather Event: Drought

Temperature: Fluctuations

Geographic Feature: ☒

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☒

resource focuses on specific location

Non-United States

Non-United States: Africa

African Region/Country: African Region

Other African Region: Sudan-Sahel region of West Africa (SSWA)

Health Co-Benefit/Co-Harm (Adaption/Mitigation): ☒

specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases

A focus of content

Health Impact: ☒

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Mitigation/Adaptation: ☒

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: ☒

populations at particular risk or vulnerability to climate change impacts

Low Socioeconomic Status

Resource Type: ☒

format or standard characteristic of resource

Research Article

Timescale: ☒

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☒



resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content